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# The Effects of Homogeneous and Heterogeneous Grouping Methods on Student Reading Attitudes

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**THE EFFECTS OF HOMOGENEOUS AND HETEROGENEOUS GROUPING  
METHODS ON STUDENT READING ATTITUDES**

**THESIS**

Submitted to the Graduate Committee of the  
Department of Education and Human Development  
State University of New York  
College at Brockport  
in Partial Fulfillment of the  
Requirements for the Degree of  
Master of Science in Education

**by**

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## Abstract

The purpose of this study was to compare the reading attitude scores of students in homogeneous reading groups to the reading attitude scores of students in heterogeneous reading groups. The subjects were forty-six fourth grade students who attended two schools in the same suburban school district located in Western New York.

One school in the district began heterogeneously grouping students for reading instruction during this 1993-1994 school year. The other school in the district homogeneously grouped students for reading instruction for many years.

Each student tested spent at least one quarter (eight weeks) in a homogeneous or in a heterogeneous reading group. The homogeneously grouped students had always been grouped this way throughout their schooling. The heterogeneously grouped students were new to this type of grouping and spent approximately three months in a heterogeneous group. Both groups use a combination of basal readers and literature in their reading classes. The heterogeneous reading group used a literature-based basal reading series and the homogeneous reading group used a more traditional, short-story type basal reader.

After the first quarter of the 1993-1994 school year was completed, the teachers in both schools gave

their homeroom students the Estes' Reading Attitude Scale. These scales were anonymously completed by the students and students were told that only the researcher would see their scales.

The researcher used a t-test for independent samples to analyze and compare the results of the homogeneous reading group and of the heterogeneous reading group. The results showed that a significant difference did not exist between the mean attitude scores of the homogeneous group and the mean attitude scores of the heterogeneous group.

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## Chapter I

### *STATEMENT OF THE PROBLEM*

There has been a long lasting debate as to whether students perform better in a homogeneous group, where students are grouped according to ability, or in a heterogeneous (mixed-ability) group. Several researchers have found that student attitudes are more positive when placed in homogeneous groups because they are not afraid to take risks. These researchers believe that if students are grouped with other students at their own level, they will have positive self-concepts. (Byrne, 1988; Filby & Barnett, 1982; Kulik & Kulik, 1982).

Other researchers believe that students have negative attitudes when placed in homogeneous groups because they are given labels. A large advantage of heterogeneous grouping is that student labels are likely to diminish. Research supports the belief that low-ability students tend to have low self-concepts and negative attitudes (Eder, 1983; Gamoran, 1986; Mann, 1960; Weinstein, 1976).

On the other hand, Winne, Woodlands, and Wong (1982) found that students labeled as "Gifted" also showed low self-concept levels. These researchers are suggesting that not only the low-ability students attain negative attitudes from being tracked, but also

the high-ability students as well.

Several people have researched homogeneous versus heterogeneous grouping in correlation with performance and self-concept. Little research, however, has been done on reading attitudes of students placed in homogeneous and in heterogeneous reading groups. Too often, researchers are concerned with student performance rather than how the students actually feel. Students may be performing well within their homogeneous groups, however, their reading attitudes may be low. This may cause these students to eventually "give up" on reading or to only read for academic purposes rather than for enjoyment. Therefore, educators need to find out whether homogeneous grouping is correlated with negative reading attitudes. If homogeneous grouping is indeed correlated with negative reading attitudes, changes in grouping should be made.

### Purpose

The purpose of this study was to compare the reading attitude scores of students in homogeneous reading groups to the reading attitude scores of students in heterogeneous reading groups.

### **Null Hypothesis**

There will be no statistically significant difference between the attitude scores of students taught in primarily homogeneous reading groups and students taught in primarily heterogeneous reading groups.

### **Need for Study**

It is important to determine whether homogeneous grouping methods correlate with negative reading attitudes. Much of the current research focuses on student self-concepts and ability grouping. However, self-concept and reading attitude are not necessarily correlated. The focus of this research was to find out if grouping students according to ability had a negative effect on reading attitudes. Educators should be aware of which methods are best for the students so that students will be interested in learning and in reading. It is important for students to enjoy reading, not only for academic purposes but for enjoyment as well.

### **Definitions**

In this study, the following terms will be defined as follows:

*Homogeneous Groups* - Students grouped together for reading instruction based on their standardized reading test scores. (Also called "ability grouping"). There are two common types of homogeneous grouping methods:

1. *Between Class Ability Groups* - the assignment of students to classrooms for reading instruction according to ability or performance based on standardized reading test scores.

2. *Within-Class Ability Groups* - the practice of assigning students to homogeneous subgroups for instruction within the class.

*Heterogeneous Groups* - Students grouped together for reading instruction regardless of their standardized reading test scores. (Also called "mixed-ability grouping").

*Reading Attitudes* - "Reading material characteristic of most types of reading; readings which enhance personal growth and self-fulfillment" (Moore & Lemons, 1982, p. 48).

### Summary

The focus of research on homogeneous and heterogeneous grouping methods has been on student

performance and on student self-concepts. Little research has focused on student reading attitudes.

Several researchers point out that students in homogeneous classrooms have lower self-concepts than students in heterogeneous classrooms (Borko & Eisenhart, 1986; Byrne, 1988; Eder, 1983; Mann, 1960; Peterson, 1989; and Winne, Woodlands, & Wong, 1982). Since self-concepts of students in homogeneous classrooms are generally lower than those in heterogeneous classrooms, will reading attitudes also be lower?

This study will focus on the reading attitudes of students placed in both types of groups. The specific purpose of this study was to answer the question: Is there a difference between the attitude scores of students placed in primarily homogeneous reading groups and students taught in primarily heterogeneous reading groups?

## Chapter II

### *Review of Literature*

#### OVERVIEW

There has been a long-lasting debate over the years concerning the problem of grouping students for instruction.

Ability grouping has long been a controversial topic in American Education. Researchers have been collecting data on its effects for almost three-quarters of a century and still disagree about its merits. Educators have argued about effects of grouping for an even longer time. Today some still hold that its necessary for successful teaching, whereas others denounce it as an undemocratic practice with negative effects on children (Kulik & Kulik, 1987, pg. 22).

In a study conducted by Mann (1960), it was revealed that ability grouping was abandoned in the thirties because of negative attitudes of "low" readers. On the other hand, Kulik and Kulik (1982) found that students in grouped (homogeneous) classes clearly developed more positive attitudes toward the subjects they were studying. The researchers further reported that "Students seemed to like their school subjects more when they studied them with peers of

similar ability , and some students in grouped classes even developed more positive attitudes about themselves and about school (1982, p. 426).

### HOMOGENEOUS GROUPING

There are two common types of homogeneous grouping methods. *Between-Class Ability Grouping*, which refers to the assignment of students to groups according to ability or performance, and *Within-Class Ability Grouping*, which is the practice of assigning students to homogeneous subgroups for instruction within the class. Each subgroup receives instruction at its own level and is allowed to progress at its own rate (Kulik & Kulik, 1987; Slavin, 1987a, 1987b).

#### *Advantages of Homogeneous Grouping*

"Proponents have argued that ability grouping lets high achievers move rapidly and gives low achievers attainable goals and extra help" (Slavin, 1987a, p. 32). Some of the research supports that position. Kulik and Kulik (1987) found that talented students perform better in homogeneous classes. In an earlier study, Kulik and Kulik (1982) found that students gained somewhat more from homogeneous classes than they did from heterogeneous ones in the area of achievement. The same study showed that students in grouped classes clearly developed more positive

attitudes toward the subjects they were studying.

Hallinan and Sorensen (1983) argue that, "Grouping students by ability permits teachers to accommodate instruction to a student's level of understanding and to place instruction according to the student's rate of learning" (p. 839). These researchers found that bright students benefit more when assigned to homogeneous rather than heterogeneous groups. Still, there is research that disputes these findings.

Kulik and Kulik (1982) reported results on a meta-analysis of findings from 52 studies of ability grouping. Eight studies reported results on student attitudes toward the subject matter taught in homogeneous and in heterogeneous classrooms. The researchers found with statistical confidence that homogeneous grouping had a positive effect on student attitudes toward the subject being taught.

#### *Disadvantages of Homogeneous Grouping*

Haskins, Walden, and Ramey (1983) found in their research that teachers spent more instructional time with low-ability students in homogeneous groups. These researchers also found that low-group students were both more disruptive and more frequently off-task than those students in higher groups. Because of this, Haskins, Walden, and Ramey suggest that teachers



should keep these students together in small groups where they can be "more easily controlled."

Femlee and Eder (1983) also found that students in low groups are more inattentive than students in higher groups. However, these researchers found that this difference in inattentiveness is due primarily to their group assignment rather than to individual characteristics. Femlee and Eder suggest that the disruptive and distracting behaviors of the low-group students was mainly due to boredom. They also suggest that teachers had lower expectations for these lower-ability students.

In a study performed by Brophy and Good (1970), it was found that teachers were more likely to accept poor performance from students for whom they held low expectations. These researchers also found that teachers were less likely to praise good performance from these low ability students when it occurred, even though it occurred less frequently.

In contrast to the 1970 study by Brophy and Good, Eder (1983) found that students in lower groups received more praise since they tended to make more mistakes than students in higher groups. Eder further suggested that poorer readers in the highest homogeneous group received considerably less praise than the poorer readers of other groups. In addition to the disadvantages of homogeneous grouping, Trimble

and Sinclair (1987) found that students in low and middle-ability classes spent less time learning, were taught lower level skills and knowledge, and were exposed to fewer types of instructional materials.

### *Self-Concepts of Students in Homogeneous Groups*

Studies have shown that low-track students often have low self-concepts. In 1976, research by Rosenbaum and in 1980, research done by Addy, Henderson, and Knox, suggested that participation in extracurricular activities appear to be indirectly linked to student friendship patterns. Whereas most high-track (high ability group) students participate in those activities, most low-track (low ability group) students do not (cited in Byrne, 1988). Byrne (1985) states that "Once classified as low-track, a student generally retains this status (and hence the label) throughout his or her (high) school years" (p. 55).

In their study, Hallinan and Sorensen (1985) researched ability grouping and student-friendships. It was found that membership in the same ability group increases the likelihood that students will become best friends. Although in their study, students were together for reading instruction for only about 30 minutes a day, they often remained together throughout the day for activities such as seat work and other

subjects. The researchers also concluded that if ability is correlated with race or social class, then ability grouping promotes friendships among students with similar backgrounds, thus encouraging race, ethnic, and social-class separations in the classroom. Haller (1985) and Dusek and Joseph (1983) all found that ability grouping is indeed correlated with race and social-class due to teacher expectancies.

In addition, Haller found that black students are most often assigned to lower ability groups in elementary schools and that teachers expect less of these students. However, just because less is expected of these students does not necessarily mean that these students perform worse than non-blacks. Gamoran (1986) conducted a research study in order to explain the relation between racial differences and learning to read. These researchers found that when black and non-black first graders are exposed to similar instruction, they do comparably well. In their study, it was found that blacks and non-blacks in the same reading groups in two classes learned about the same and deviations from the pattern did not favor either race consistently.

Gamoran (1986) states that ability grouping may create differences between status levels in student motivation and performance. In addition, Gamoran suggests that students in high-ability groups may be

motivated to learn more while students in low-ability groups may have low expectations and thus achieve less.

In support of Gamoran's research, Trimble and Sinclair (1987) found little evidence to suggest that any group of students consistently benefits from ability grouping. In addition, they found a large body of literature that concluded that low-level students develop strong negative attitudes toward school and toward themselves as a result of ability grouping.

In Eder's 1983 study, a first grade homogeneous classroom was observed. Despite the teacher's attempt to minimize awareness of ability levels, there were some basic differences between groups that were noticed by the students. Many students began to develop a notion of some groups being "ahead of" or "behind" other groups. As the students became aware of the group differences, they communicated this information to other students.

Eder found that the low group students had low self-concepts because they saw their groups as having more difficulty reading. However, the poorer readers in the high groups received a minimal amount of praise, perhaps because they were not perceived as needing encouragement or because they had less difficulty reading than did the poorer readers in

other groups.

Peterson (1989) asked hundreds of school administrators across North America the following question:

Why is it that, in almost every school system in North America, you still group students by ability - in spite of consistent research over several years indicating that ability grouping as good as condemns remedial students to an endless stream of not-so-remedial education? (Peterson, 1989, p. 38)"

The two reasons administrators gave for grouping by ability were: First, they said, teachers find it easier to teach homogeneous classes than heterogeneous classes. Second, they said, teachers believe remedial students have a better self-concept when they compete with others of a similar ability (Peterson, 1989).

### HETEROGENEOUS GROUPING

Heterogeneous grouping is the process of grouping students with varied abilities into learning groups so that there are several mixed-ability groups within the classroom. The most common type of heterogeneous grouping is *cooperative learning*. Cooperative learning refers to various instructional methods in which students work in small, heterogeneous learning groups toward some sort of group goal.

#### *Advantages of Heterogeneous Grouping*

In a study administered by Wilkinson and Calculator (1982) it was found that in mixed-ability groups, high-ability and low-ability students interacted with one another and the high-ability children helped the low-ability children. Wilkinson and Spinelli (1983) found that second and third grade students are effective speakers in peer-directed instructional groups because they obtained appropriate responses to their requests for action and information most of the time from their peers instead of the teacher.

In heterogeneous groups, low-ability students can still be taught needed basic skills by combining cooperative learning with within-class ability grouping (Slavin, 1987a, 1987b). In reading and language arts for example, students work in mixed-

ability teams on a series of reading activities. These activities include reading aloud to each other and completing activities relating to story structure, reading comprehension, decoding, vocabulary, and spelling. In writing, students engage in peer-response groups in a writing-process model. According to Slavin (1987a) significant improvements in student performance in reading and math were found when cooperative learning and within-class ability grouping were combined.

#### *Disadvantages of Heterogeneous Grouping*

In their 1982 study, Filby and Barnett collected data from two second grades and two fifth grades in order to learn about student perceptions of "better readers." One second grade classroom and one fifth grade classroom were grouped homogeneously while the other second and fifth grade classrooms were grouped heterogeneously.

These researchers found that students based their decision on which students were better readers on a detailed analysis of oral reading performance. It was found that low-ability students were more easily noticed in heterogeneous classrooms because their oral reading was less fluent. When students were in homogeneous groups, their lack of reading fluency was not as noticeable. The researchers suggest that low-

ability students have more positive self-concepts in homogeneous groups than in heterogeneous groups because in heterogeneous groups, everyone is aware of the hierarchy.

Filby and Barnett (1982) also suggest that heterogeneous groups promote friendships based on ability, with low-ability students friendly with other low-ability students and high-ability students friendly with other high-ability students. These findings are not consistent with other research findings previously stated.

Sorensen and Hallinan (1986) suggested that one reason for a positive effect of homogeneous grouping would be that, "the greater homogeneity of students and their greater attentiveness allow the teacher to cover more material in the same period of time and thus provide more opportunities for learning for students" (p. 522).

#### *Self-Concepts of Students in Heterogeneous Groups*

There is not much research in the area of self-concepts of students in heterogeneous classrooms. While much of the research suggests that students in homogeneous classrooms have low self-concepts, the research does not necessarily suggest that students in heterogeneous groups have high self concepts. Filby and Barnett (1982) did find that students in



heterogeneous groups had lower self-concepts than students placed in homogeneous groups. However, much of the other research is not consistent with the findings of Filby and Barnett.

In addition, Peterson (1989) could not find evidence that students have a higher self-concept when they are grouped homogeneously than when they are placed in mixed, heterogeneous classrooms. However, as previously stated, there is much evidence to suggest that students in homogeneous classrooms have lower self-concepts than students who are heterogeneously grouped (Borko & Eisenhart, 1986; Byrne, 1988; Eder, 1983; Mann, 1960; Peterson, 1989; and Winne, Woodlands, & Wong, 1982). Peterson concludes that, "Students are well aware of which group they are placed in, and a student's placement can be as devastating to his self-concept as any frustration he might feel in a mixed classroom" (1989, p. 38).

### READING ATTITUDE

"Educators are quick to point out that students' attitudes toward the content of a reading selection influence the time students spend with the selection and their comprehension of it" (Moore & Lemons, 1982, p. 49). Flake, Piersel, Harding, and Reynolds (1982) all point out that the importance of attitude of students towards school subjects, such as reading, has long been acknowledged by educators as an important variable in the educational process. In 1985, Hiebert, Scott, and Wilkinson (cited in McKenna & Kear, 1990, p. 626) stated that "the emotional response to reading...is the primary reason most readers read, and probably the primary reason most readers do not read." Also cited in McKenna and Kear's 1990 article (p. 626), Wixon and Lipson acknowledged that "the student's attitude toward reading is a central factor affecting reading performance." McKenna and Kear concluded that "the focus of recent research and development in assessment has been comprehension rather than attitude" (p. 626). These researchers also concluded that attitude and achievement have been consistently linked. As previously stated, Kulik and Kulik (1982) found that students in homogeneous classes developed more positive attitudes toward school subjects than did students in heterogeneous classes. Research to

dispute this finding was not found.

## **Chapter III**

### ***DESIGN OF STUDY***

#### **Purpose**

The purpose of this study was to compare the reading attitude scores of students in homogeneous reading groups to the reading attitude scores of students in heterogeneous reading groups.

#### **Null Hypothesis**

There will be no statistically significant difference between the attitude scores of students taught in primarily homogeneous reading groups and students taught in primarily heterogeneous reading groups.

#### **Methodology**

##### **Subjects**

The subjects for this study were forty-six fourth grade students who attended two schools in the same suburban school district located in Western New York. One school in the district began heterogeneously grouping students for reading instruction during this 1993-1994 school year. Twenty-six students in this reading class were tested.

The other school in the district homogeneously grouped students for reading instruction for many years. The homogeneous grouping method used in this school was Between-Class Ability Grouping. Twenty students in a fourth grade homeroom were tested to ensure a mix of high, middle, and low readers. Had the researcher tested one of the reading groups in this school instead of the homeroom, only one level of readers would have been tested.

### Materials

The Estes' Reading Attitude Scale (1971) was administered to the forty-seven students. This scale has been found to have a reliability of .92 for grades 3-6.

### Procedure

Each student tested spent at least one quarter (eight weeks) in a homogeneous or in a heterogeneous reading group. The homogeneously grouped students have always been grouped this way throughout thier schooling. The heterogeneously grouped students were new to this type of grouping and spent approximately three months in a heterogeneous group. Both groups used a combination of basal readers and literature in their reading classes. The heterogeneous group began using a literature based basal reading series during the 1993-1994 school year. The homogeneous reading

group used a more traditional, short-story type basal reader for reading instruction.

After the first quarter of the 1993-1994 school year was completed, the teachers in both schools gave their homeroom students the Estes' Reading Attitude Scale. The teachers were instructed to tell the students that only the researcher would see their attitude scales. Students were also told not to put their names on their scales. In order for the researcher to know which students were high, medium, and low level readers, the homeroom teachers were asked to put either a small number one, two, or three on the bottom of each attitude scale. The "number one" scales went to the high readers, "number two" scales went to the middle readers, and "number three" scales went to the low readers. The students were not ware of these number differences. Students were reminded to be honest when completing the attitude scales and were told that their teacher would not see them. They were also told that the scales would in no way effect their grades. A student in each group was asked to collect the completed attitude scales so that the teachers would not see them. The completed scales were put in a sealed, manilla envelope and given to the researcher. The researcher reviewed the completed attitude scales from each group and scored them.

### Analysis

A t-test for independent samples was used to analyze and compare the results of the homogeneous group and of the heterogeneous group.

## Chapter IV

### ANALYSIS OF DATA

#### Purpose

The purpose of this study was to compare the reading attitude scores of students in homogeneous reading groups to the reading attitude scores of students in heterogeneous reading groups.

#### Statistical Analysis

The null hypothesis of this study was that there would be no statistically significant difference between the attitude scores of students taught in primarily homogeneous reading groups and students taught in primarily heterogeneous reading groups.

The data collected for this study were established in terms of total class attitude scores obtained from the Estes' Reading Attitude Scale. The statistical significance of the null hypothesis proposed by the examiner was evaluated by an independent  $t$ -test.

#### Findings and Interpretations

Table 1 summarizes the statistical findings of the analysis.



**Table 1**

Differences Between Reading Attitude Scores of Homogeneously Grouped Students and of Heterogeneously Grouped Students.

	Homogeneous	Heterogeneous
Mean	85.95	82.62
Standard Deviation	11.48	8.87
Number of Students	20	26

The mean attitude score for the homogeneously grouped class was 85.95 and the mean attitude score for the heterogeneously grouped class was 82.62. The obtained  $t$ -value was at 1.11.

Since the critical  $t$  with 44 degrees of freedom was approximately 2.017, no significant difference existed. Therefore, this study failed to reject the null hypothesis.

## Chapter V

### CONCLUSIONS AND IMPLICATIONS

#### Conclusions

A long lasting debate in education has been whether students perform better in primarily homogeneously grouped classes or in primarily heterogeneously grouped classes. Much of the current research thus far has focused on the academic performance of students placed in homogeneous and in heterogeneous groups. A great deal of research has also compared the self-concepts of students placed in both groups. A limited number of studies, however, has compared the attitudes of students placed in homogeneous and in heterogeneous groups. In other words, much of the current research has ignored students' feelings about being placed in each type of group situation.

The present study sought to compare the reading attitude scores of students in heterogeneous reading groups to the reading attitude scores of students in homogeneous reading groups. The results of this study did not indicate a statistically significant relationship between the reading attitude scores of these groups.

An interesting finding was that the attitude scores of the homogeneously grouped students were

fairly inconsistent. The high score in this group was a perfect score of 100 and the low score was 58. The range between the high and low scores of the homogeneous group was 44. On the other hand, the attitude scores of the heterogeneously grouped class was more consistent. The high score in this group was 98 and the low score was 62. The range between the high and low score of the heterogeneous reading group was 36.

The similar scores between the two groups may have been due to the fact that students in the heterogeneous group spent only three months in this type of grouping. These students were used to homogeneously grouped reading classes from previous years. Therefore, the mean differences between the attitude scores of the two groups may have been larger had the heterogeneously grouped students spent more time in this type of group.

#### Implications for the Classroom

Several researchers have pointed out that reading attitude and achievement have been consistently linked. "Educators are quick to point out that students' attitudes toward the content of a reading selection influence the time students spend with the selection and their comprehension of it" (Moore & Lemons, 1982, p. 49). The current study has reviewed advantages and disadvantages of homogeneous groups and

of heterogeneous groups. Since the research has focused mainly on student performance and self-concept, it is time to focus now on student attitudes. Students need to become excited about reading and should "want" to read. Educators should be aware of what classroom setting provides the most motivation and encouragement for reading.

In addition, teachers need to look at student reading attitudes more closely. If students in a particular classroom have low reading attitudes, the teacher needs to look into making changes in order to improve these attitudes.

#### Implications for Further Research

The current study has much room for further review and analysis. It would have been interesting to compare the attitude scores of the low readers in homogeneous and in heterogeneous classes. The teacher of the heterogeneously grouped class put small numbers in the corner of each Attitude Scale. She gave the number one scales to her low readers, the number two scales to the average readers, and the number three scales to the high readers. Students were unaware of this code. It was found that the low readers in the heterogeneous group had very high attitudes. Unfortunately, the same data were not collected by the teacher of the heterogeneously grouped class. This would be an interesting area to research. If low

readers do indeed have high reading attitudes when placed in heterogeneous groups, then we, as educators, need to make sure that heterogeneous groups prevail in our schools.

As previously mentioned, the students in the heterogeneous group researched in the current study were only in this group for three months. In previous school years, these students were in homogeneous reading groups. If the attitude scores of the low readers continues to remain high, these "low" readers may eventually become "high" readers. It is extremely important for students to have high reading attitudes so that they have a desire to read and to learn. If placing students in heterogeneous reading groups does in fact increase student attitude, then heterogeneous grouping methods should be mandatory in every school district.

More research needs to be done on student attitudes and grouping methods so that educators can find out how the students actually feel. Students need to be heard and educators should look to these children for some answers. After all, these children are our future!

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## **APPENDIX A**

## ESTES' READING ATTITUDE SCALE

Directions for Administering and Scoring

1. Reproduce the scale with an answering sheet that provides five spaces (A - E) for each of the twenty items.
2. Students should be assured that the manner in which they respond to the scale will not possibly affect their grade or standing in the course.
3. Notice that some items are positive statements and some are negative. Responses to these items will differ in value. (To "agree" to a positive statement is to reflect a positive attitude, whereas, to "agree" to a negative statement is to reflect a negative attitude. The table below is to be referred to in scoring.
4. With practice, the scorer can mark the negative items just prior to scoring and assign the proper value to each item at a glance.
5. The student's total score is a quantitative reflection of his attitude toward reading.
6. By administering the scale on a pre and post (October and May) basis, the teacher can note changes in attitude toward reading by subtracting the early score from the later one.

Items	Response Value				
	A	B	C	D	E
Negative items are numbers: 1, 3, 4, 6, 8, 9, 11, 12, 13, 16, 17, 20	1	2	3	4	5
Positive items are numbers: 2, 5, 7, 10, 14, 15, 18, 19	5	4	3	2	1

N.B. A relatively neutral position would be about 60.

Source: Estes, T. H. "A Scale to Measure Attitudes Toward Reading."  
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Fearon Press, 1969.

## ESTES' READING ATTITUDE SCALE

A = strongly agree

B = agree

C = undecided

D = disagree

E = strongly disagree

Statements	Responses				
	A	B	C	D	E
1. Reading is for learning but not for enjoyment					
2. Money spent on books is well spent.					
3. There is nothing to be gained from reading books.					
4. Books are a bore.					
5. Reading is a good way to spend spare time.					
6. Sharing books in class is a waste of time.					
7. Reading turns me on.					
8. Reading is only for grade grubbers.					
9. Books aren't usually good enough to finish.					
10. Reading is rewarding to me.					
11. Reading becomes boring after about an hour.					
12. Most books are too long and dull.					
13. Free reading doesn't teach anything.					
14. There should be more time for free reading during the school day.					
15. There are many books which I hope to read.					
16. Books should not be read except for class requirements.					
17. Reading is something I can do without.					
18. A certain amount of summer vacation should be set aside for reading.					
19. Books make good presents.					
20. Reading is dull.					

## **APPENDIX B**

*Scores of 20 students in homogeneous reading groups on the  
Estes' Reading Attitude Scale:*

<u>Student</u>	<u>Score</u>
#1	94
#2	85
#3	91
#4	91
#5	100
#6	75
#7	90
#8	88
#9	66
#10	79
#11	58
#12	96
#13	100
#14	85
#15	80
#16	81
#17	93
#18	73
#19	97
#20	97

Mean ..... 85.95

Median ..... 89.00

Standard  
Deviation .... 11.48

Range ..... 42.00

Scores of 26 students in a heterogeneous reading group on the  
Estes' Reading Attitude Scale:

<u>Student</u>	<u>Score</u>
#1	94
#2	74
#3	81
#4	84
#5	86
#6	98
#7	86
#8	83
#9	68
#10	77
#11	90
#12	88
#13	87
#14	80
#15	88
#16	83
#17	88
#18	91
#19	84
#20	88
#21	64
#22	62
#23	80
#24	72
#25	80
#26	92

Mean ..... 82.62

Median ..... 84.00

Standard  
Deviation .... 8.87

Range ..... 36.00